

Claims:

1 1. A wireless transceiver system, comprising:
2 a processor;
3 a memory for storing computer instructions that define
4 operational logic of the wireless transceiver system, wherein
5 the logic causes the transceiver system to increase or
6 decrease transmission power levels by a factor that is
7 characterized by the equation of $N + \Delta$ according to whether a
8 data transmission rate is increased or decreased by a factor
9 of N and wherein the logic defines the value of Δ so that it
10 varies according to at least one of detected system
11 conditions and system data transmission rates; and
12 an internal bus coupled to the processor and the memory
13 wherein the processor receives the computer instructions from
14 the memory over the bus to execute the computer instructions.

1 2. The wireless transceiver of claim 1 wherein the Δ
2 value varies according to the amount of change in the data
3 transmission rate.

1 3. The wireless transceiver of claim 2 wherein a first
2 Δ value relates to an additional amount of power reduction
3 when the amount of change in the data transmission rate is
4 reduced to HALF relative to FULL data transmission rates.

1 4. The wireless transceiver of claim 2 wherein a
2 second Δ value relates to an additional amount of power
3 reduction when the amount of change in the data transmission
4 rate is reduced to QUARTER relative to FULL data transmission
5 rates.

1 5. The wireless transceiver of claim 1 wherein the
2 delta values vary according to network conditions.

1 6. The wireless transceiver of claim 1 comprising a
2 base station controller.

1 7. The wireless transceiver of claim 1 comprising a
2 base station transceiver system.

1 8. The wireless transceiver of claim 1 wherein the
2 computer instructions define logic for heuristically varying
3 the values of Δ .

1 9. The wireless transceiver of claim 1 wherein the
2 computer instructions define logic for varying the values of
3 Δ according to measured E_b/N_0 values on the reverse link.

1 10. The wireless transceiver of claim 1 wherein the
2 computer instructions define logic for varying the values of
3 Δ according to the frame error rate being realized by the
4 mobile station wherein the mobile station transmits a
5 calculated frame error rate to the base station.

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1 11. A method for transmitting communication signals
2 from a first wireless transceiver to a second wireless
3 transceiver in a code division multiple access network,
4 comprising:

5 transmitting the communication signals at a first data
6 rate and at a first power level; and

7 transmitting the communication signals at a second data
8 rate and at a second power level wherein a difference in the
9 first and second data transmission rates is less than the
10 difference in the first and second power levels.

1 12. The method of claim 11 wherein the data rate is a
2 full data rate and wherein the first power level is a full
3 power level.

1 13. The method of claim 12 wherein the first data rate
2 is 2 times greater than the second data rate and wherein the
3 first power level is (2 plus delta one) times greater than
4 second power level wherein delta one reflects a first
5 additional power level change factor.

1 14. The method of claim 12 wherein the first data rate
2 is 4 times greater than the second data rate and wherein the
3 first power level is (4 plus delta two) times greater than
4 second power level wherein delta two reflects a second
5 additional power level change factor.

1 15. The method of claim 12 wherein the first data rate
2 is 8 times greater than the second data rate and wherein the
3 first power level is (8 plus delta three) times greater than
4 second power level wherein delta three reflects a first
5 additional power level change factor.

1 16. The method of claim 11 further including the step
2 of transmitting a target frame error rating from the first
3 transceiver to the second transceiver whereby the second
4 transceiver bases its power control processing in part on the
5 received frame error rate.

1 17. The method of claim 16 wherein one of a first or a
2 second target frame error rate is transmitted according to
3 network conditions.

1 18. The method of claim 17 wherein the first target
2 frame error rate is transmitted whenever voice is being
3 transmitted.

1 19. The method of claim 17 wherein the second target
2 frame error rate is transmitted whenever voice is not being
3 transmitted.

1 20. The method of claim 17 wherein the first target
2 frame error rate is transmitted whenever a lull in a
3 conversation is detected.

1 21. The method of claim 17 wherein the mobile station
2 bases its power control commands based upon a first frame
3 error rate whenever communication signals are received at
4 full power.

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1 22. A method for determining whether to transmit power
2 up or power down commands, comprising:

3 transmitting power up and power down commands according
4 to whether a calculated frame error rate for a received
5 communication signal is higher or lower than a target frame
6 error rate; and

7 using one of at least two target frame error rates
8 according to a data rate of the received communication
9 signals.

1 23. The method of claim 22 wherein the first frame
2 error rate is approximately equal to one percent.

1 24. The method of claim 21 wherein the second frame
2 error rate is approximately equal to five percent.